Name: **Enrolment No:**	UPES UNIVERSITY OF TOMORROW

UPES

End Semester Examination, December 2024

Course: Lean Manufacturing **Semester: III**

Program: MBA Operations **Time: 03 hrs.**

Course Code: LSCM8018 **Max. Marks: 100**

Instructions:

SECTION A

10Qx2M=20Marks

S. No.	Answer all the questions	Marks	CO
Q 1	What is the primary focus of Lean Thinking? A. Improving employee satisfaction B. Increasing production speed C. Delivering value to the customer D. Expanding market share	**2**	**CO1**
Q 2	Which of the following is NOT one of the seven types of waste (Muda) in Lean? A. Overproduction B. Transportation C. Underutilized talent D. Data processing	**2**	**CO1**
Q 3	Explain TPS.	**2**	**CO1**
Q 4	What is "Pull System" in Lean? A. Producing based on demand B. Producing in advance to meet future needs C. Minimizing inventory in warehouses D. Pushing products to customers aggressively	**2**	**CO1**
Q 5	What does "Heijunka" mean in Lean? A. Continuous improvement B. Error-proofing C. Leveling production to reduce variability D. Eliminating non-value-added steps	**2**	**CO1**
Q 6	Which Lean tool focuses on workplace organization and cleanliness? A. Jidoka B. Kanban C. 5S D. Takt Time	**2**	**CO1**
Q 7	In Lean, what is the purpose of a "Fishbone Diagram"? A. To improve team communication	**2**	**CO1**

	B. To identify root causes of problems C. To map the value stream D. To reduce material waste		
Q 8	What is the purpose of "Kanban" in Lean methodology? A. To automate production lines B. To manage and control workflow visually C. To reduce workforce size D. To improve supply chain logistics	**2**	**CO1**
Q 9	What does the term "Poka-Yoke" refer to in Lean? A. A mistake-proofing mechanism B. A production scheduling tool C. A method to reduce inventory D. A technique to measure efficiency	**2**	**CO1**
Q 10	What is "Jidoka" in Lean? A. Automating processes without human intervention B. Stopping work to fix a problem immediately C. Reducing inventory costs D. A method to manage suppliers	**2**	**CO1**
SECTION B **4Qx5M= 20 Marks**			
Q 11	Describe the role of Value Stream Mapping (VSM) in identifying and eliminating non-value-added activities in Lean.	**5**	**CO2**
Q 12	What is Jidoka, and how does it contribute to ensuring quality in production processes?	**5**	**CO2**
Q 13	Describe the two pillars of the Toyota Production System and their significance in manufacturing.	**5**	**CO2**
Q 14	Explain Inventory, its necessity and appropriate reason to Carry Inventory?	**5**	**CO2**
SECTION-C **3Qx10M=30 Marks**			
Q 15	A small business wants to improve customer satisfaction by delivering products faster without compromising quality. Suggest how Lean principles such as Just-In-Time (JIT) and continuous improvement can help achieve this goal.	**10**	**CO3**
Q 16	A production line at a factory produces a batch of faulty products, but the defect is only discovered after the batch is completed. How could implementing Jidoka have prevented this issue, and what steps should be taken to integrate Jidoka into the production process?	**10**	**CO3**
Q 17	A bakery is overproducing cakes, leading to unsold inventory and increased waste. Which types of waste in Lean are evident in this situation, and how can the bakery implement Lean practices to reduce these wastes?	**10**	**CO3**

SECTION-D 2Qx15M= 30 Marks			
Q 18	TechParts Inc., a company manufacturing precision machine components, has been struggling with operational inefficiencies. A recent analysis identified key issues such as overstocked inventory, excessive movement of materials between workstations, and prolonged waiting times in the production line. Additionally, employees report frequent delays due to disorganized workspaces and unclear processes. How can TechParts Inc. use tools like value stream mapping, root cause analysis, and the 5S methodology to identify and eliminate MUDA (waste) in their operations? Provide a detailed approach for applying these tools to address the issues highlighted in the caselet.	**15**	**CO4**
Q 19	What are the major inventory-related costs (carrying cost, ordering cost, and stockout cost)? Provide examples of how these costs influence decision-making in inventory management.	**15**	**CO4**